CITY OF LINCOLN
PUBLIC WORKS AND UTILITIES
WEB STANDARDS

Revised September 10, 2004

These Standards contain guidelines for contracted web designers creating Internet material for Public Works and Utilities. These Standards apply to website files that are created by a consultant, hosted by the consultant and later transferred to Public Works and Utilities web staff for posting on the InterLinc.

Information in this document is subject to change without notice. Please confirm you have the *most current version* of web standards before proceeding with website creation.

Overview

The City of Lincoln's website, InterLinc, is a vast collection of web pages which provides the public with information about what is going on in City/County government. The Public Works and Utilities Department, being one of the largest departments in the City, has a great amount of web pages to maintain. For this reason, it is important that websites are developed accurately and consistently.

HTML Requirements

There are many user agents available, including desktop graphical browsers, text browsers, voice browsers, handheld devices, multimedia players and plug-ins. There are also software assistive technologies used in conjunction with browsers such as screen readers, screen magnifiers, and voice recognition software. It is, therefore, impossible to test every possible condition under which a web page may be viewed. Creating web pages using strict HTML/XHTML code is the only way to provide accessibility across a variety of medium.

Programs

The City does not support the use of code-generating programs, such as FrontPage or Flash, to develop websites residing on the InterLinc. These programs create extraneous code, which increases file size and, in most cases, does not meet current HTML/XHTML standards or accessibility guidelines. Code must be written using ASCII text in text editor, such as Notepad.

Validation

Before a page is posted on the Public Works and Utilities website it must pass a markup validation check with an **HTML 4 *Strict*** DTD or an **XHTML 1 *Strict*** DTD. The markup

validator is located on W3C's website at http://validator.w3.org. For more information about validation please visit the "Help and FAQ for the Markup Validator" at http://validator.w3.org/docs/help.html.

Structure and Semantics

Proper HTML structure is based on logic, order, and using semantically correct markup. For example, if you have heading, use the heading element, beginning with the H1 element. If you have a paragraph, use a paragraph element. If you have a list, use a list item element. If you are quoting a few lines, use a blockquote element. Those elements provide meaning to the content, making them semantically correct, in addition to being solid HTML structure.

Once your HTML structure is in place with the appropriate markup, add CSS (see below) for visual presentation. Start with good HTML structure and then add the CSS with an external style sheet, for the visual presentation that you have in mind.

For more information about HTML document structure please visit http://www.w3.org/TR/REC-html40/struct/global.html.

Cascading Style Sheets

CSS is a simple mechanism for controlling the style of a web document without compromising its structure. By separating visual design elements (fonts, colors, margins, etc.) from the structural logic of a web page, CSS gives web designers visual control without sacrificing the integrity of the data. In addition, defining typographic design and page layout from within a single, distinct block of code, without use of FONT tags, tables, and spacer GIFs - allows for faster downloads, streamlined site maintenance, and instantaneous global control of design attributes across multiple pages.

Public Works and Utilities web pages utilize two external CSS files linked within the HEAD section of each page. There is a citywide style sheet and a department-wide (Public Works and Utilities) style sheet.

Please use external style sheets for Public Works and Utilities websites. Use inline styles sparingly, for instances when only one application of the style is required.

Page Layout

Header/Footer

Each page on the InterLinc uses a horizontal header and footer. The header and footer are designed to provide quick access to other areas of the InterLinc, allowing the user to be aware of their location on the site.

If you are **hosting** a site for Public Works and Utilities, **do not try to duplicate the City's "look."** Doing so will only confuse users because they may think they are on the InterLinc when they are not. Instead, use your organization's horizontal header/footer. When the web pages are relocated to the City's website, a Public Works and Utilities web designer will apply the header/footer template to include the InterLinc navigation links and logos.

Element Size

The Public Works and Utilities website utilizes **relative** element sizing (font size, page width, etc.) from style sheet controls. Please do not use absolute size values for elements (with the exception of images).

Tables

HTML tables are intended for organization of **tabular data**, not page layout. Using tables for visual layout produces code that is confusing to update and compromises the structural integrity of the HTML (see Semantics, above).

Avoid using tables for visual layout. If you do not believe desired visual layout can be achieved without the use of an HTML table, please contact Public Works and Utilities web staff to discuss alternative solutions.

PDF Requirements

On the Public Works and Utilities website, PDF format is generally used for printable documents. Appropriate uses of PDF files include:

- Printable forms
- Printable brochures
- Lengthy text documents with few images

A PDF file must be created from a digital document. A scan of a hard copy saved as a PDF is not acceptable. Scanned images contain no text data, are beyond reasonable file size and do not look professional.

PDF file sizes can get very large when the document contains images. Please use the lowest resolution possible to maintain image quality. If the document is over 1 megabyte, the document should be broken up into smaller pieces, with HTML links to each piece. Indicate, in parentheses next to the link, the size of the PDF file. The complete document may be offered as a ZIP download.

JavaScript

JavaScript is a very powerful tool for creating interactivity on web pages, but complex JavaScript code can cause compatibility and accessibility issues. Some browsers do not support JavaScript and all browsers provide the option to disable JavaScript. Pages containing JavaScript code must contain a NOSCRIPT section in the HTML code to provide a non-JavaScript alternative – even if it is just a link to a text-only version.

Like HTML, JavaScript must be tested on a variety of browsers and platforms to ensure compatibility.

*Please limit use of JavaScript to prevent compatibility problems.

Images

Image files should be in GIF or JPG format. Generally "photo-type" images should be in JPG format and "solid-color" images should be GIF format. If you are unsure which format to use, save the same image as both GIF and JPG and compare quality and file size.

File size should be kept to a minimum on web pages. However, if you would like to display a high-resolution or large image you may provide a link to the larger copy.

Please specify height, width and alternative text for all images. Use style sheets to control margins and positioning of images.

File Structure and Naming Convention

Directories should be named in accordance with navigation categories located within the website. For example, the Public Works and Utilities homepage has links to each division's homepage. The folders containing files for each division are named correspondingly. In addition, like files should be grouped in folders. All images should be placed in an "images" directory, Acrobat files in a "pdf" directory, etc.

File and directories should be named using lower-case text. Files on the InterLinc adhere to an 8.3 file naming convention – no file names longer than eight characters with a three-character extension (.htm, not .html).

Submitting Files

1. Prior to submitting files to Public Works and Utilities staff, please complete the checklist (attached).

Summary

The information in this document is subject to change without notice. If you are unsure whether you have the most current version, please contact Public Works and Utilities Web Staff.

If you have any questions or need clarification about these Web Standards, please contact Public Work and Utilities web staff.

Contact

Michelle Zuhlke
531 Westgate Blvd., Ste. 100
Lincoln, NE 68528

Phone: (402) 441-7635
Email: mzuhlke@lincoln.ne.gov

PUBLIC WORKS AND UTILITIES WEBSITE CHECKLIST

❑   HTML was created with a text editor

❑   Code was validated as **HTML 4 *Strict*** or **XHTML 1 *Strict*** at validator.w3.org

❑   Used proper HTML structure and semantics

❑   Used external style sheet for document formatting

❑   Used relative element sizing

❑   Used style sheets for visual layout

❑   Used tables for organization of tabular data (if applicable)

❑   Included no PDF files over 1 M

❑   Indicated file size (in parentheses next to link) for all PDF documents

❑   Included NOSCRIPT section in HTML code for pages with JavaScript (if applicable)

❑   Indicated height, width and alternative text for all images

❑   Subdivided files in directories according to navigational structure

❑   Named directories using eight characters or less

❑   Named files using eight characters or less with a three character extension